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10/625,633	07/23/2003	George M. Hutchinson	066243-0166 (128639)	8071
7590 12/26/2007 JOSEPH D. KUBORN ANDRUS, SCEALES, STARKE & SAWALL 100 EAST WISCONSIN AVENUE SUITE 1100 MILWAUKEE, WI 53202			EXAMINER NAQI, SHARICK	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/625,633	Applicant(s) HUTCHINSON ET AL.	
	Examiner Sharick Naqi	Art Unit 3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-14,16,17,20,22,24,25,27,28,60,61 and 66-76 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-14,16,17,20,22,24,25,27,28,60,61 and 66-76 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Claim Objections***

Claim 11 is objected to because of the following informalities:

On page 4, lines 4 of the claims, "form" and "et" are typographical errors.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Line 1 of claim 12 and line 1 of claim 13 state "wherein determining which algorithm to apply comprises . . . ." However, the independent claim 11, upon which both claims depend, has been amended to remove the step of determining at least one algorithm to apply. It is unclear to the examiner from the claim language which step of the independent claim is being addressed by the limitations of claims 12 and 13. Examiner has used his best guess and applied the prior art in a manner sufficient to meet the claim.

Claim 66 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Lines 8-9 of the claim recite the limitation, "receiving a selection first based on a selected diagnostic interpretation of a second rule set

Art Unit: 3736

comprising a second plurality of algorithms.” It is unclear to the Examiner exactly what is meant by this limitation. Examiner has used his best guess and applied the prior art in a manner sufficient to meet the claim.

Claims 70 and 71 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Lines 1-2 of claim 70 state, “the first type of diagnostic interpretation is a general case diagnostic interpretation is a specific case diagnostic interpretation.” It is unclear to the examiner whether the first type is a specific case or a general case. Claim 71 is indefinite due to its dependence on claim 70. Examiner has used his best guess and applied the prior art in a manner sufficient to meet the claims.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claim 1, 2, 3, 11, 12, 13, 14, 20, 24, 25, 27, 28, 60, 61, 66-76 are rejected under 35 U.S.C. 102(b) as being anticipated by Rottem USPN 6,032,678.**

1. A patient physiologic monitoring assembly comprising:

a plurality of sensors generating a real-time physiologic data stream, said real-time physiologic data stream including a plurality of physiologic variables; (column 1, lines 45-64, column 4, lines 9-60. Images of organs.)

a first logic rule set including a plurality of logic rules for interpreting the physiologic variables; (column 4, lines 9-60, column 5, lines 1-67. Computer scans images and determines information about landmarks to generate a matrix of possible conditions relative to organs for display to operator)

a second logic rule set including a plurality of logic rules for interpreting the physiologic variables; (column 4, lines 9-60, column 5, lines 62-67, column 6, lines 1-67. Based on user selection the differential diagnosis is done.)

a controller receiving said real-time physiologic data stream, said controller including a logic adapted to; (column 4, lines 9-60)

cross reference said plurality of physiologic variables with the first logic rule set and second logic rule set; (column 4, lines 9-60) and

generate at least a first diagnostic interpretations of said plurality of physiologic variables utilizing said first logic rule set and a second diagnostic interpretation of said plurality of physiologic variable utilizing the said second logic rule set. (column 4, lines 9-60, columns 5 and 6)

2. A patient physiologic monitoring assembly as described in claim 1, wherein said logic is further adapted to display said first and second diagnostic interpretations on a display element. (column 4, lines 9-60, columns 5 and 6. All data is shown on video display)

3. A patient physiologic monitoring assembly as described in claim 1, wherein said logic is further adapted to select said first logic rule set and said second logic rule set from a rules database, said rules database including a plurality of logic rule sets. (column 4, lines 9-60, columns 5 and 6. selected based on images of organs and conditions)

11. A method for providing diagnostic aid to a clinician monitoring the medical condition of a patient, the method comprising:

storing a plurality of sets of rule-based algorithms capable of generating different diagnostic interpretations of the same physiological data; (column 4, lines 9-60, columns 5 and 6.)

acquiring physiological data relating to the patient from at least one sensor;  
applying at least one rule-based algorithm from a first set of the of the rule-based algorithms to the acquired data; (column 1, lines 45-64, column 4, lines 9-60, columns 5 and 6. Images analyzed by computer)

generating a first diagnostic interpretation based on the application of the at least one rule-based algorithms from the first set to the acquired data; (column 4, lines 9-60, columns 5 and 6)

Art Unit: 3736

displaying the first diagnostic interpretation to the clinician; (column 4, lines 9-60, columns 5 and 6)

applying at least one rule-based algorithm from a second set of the rule-based algorithms to the acquired data: (column 4, lines 9-60, columns 5 and 6)

generating a second diagnostic interpretation based on the application of the at least one rule-based algorithm from the second set to the acquired data: (column 4, lines 9-60, columns 5 and 6) and

displaying the second diagnostic interpretation to the clinician. (column 4, lines 9-60, columns 5 and 6)

12. The method of claim 11, wherein determining which algorithm to apply comprises displaying a list of choices to a clinician and receiving a clinician input indicative of a selection made by the clinician. (column 4, lines 9-60, columns 5 and 6. Choices displayed to user and selection accepted.)

13. The method of claim 11, wherein determining which rule-based algorithm to apply comprises receiving data relating to a characteristic of the patient, and selecting a rule-based algorithm to apply based on the electronic logical analysis of the received data relating to the characteristic of the patient. (column 4, lines 9-60, columns 5 and 6. Computer performs analysis on images)

14. The method of claim 13, wherein acquiring data relating to the patient comprises

Art Unit: 3736

acquiring vital signs data. (column 4, lines 9-60, columns 5 and 6)

20. The method of claim 11, wherein generating a response is based on applying a plurality of rule-based algorithms from a set of rule-based algorithms. (column 4, lines 9-60, columns 5 and 6)

24. The method of claim 72, wherein acquiring patient data relating to the subject comprises acquiring physiological data relating to the patient from at least one sensor coupled to the subject. (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6)

25. The method of claim 21, wherein acquiring patient data comprises acquiring data from a database record relating to the subject. (column 6, lines 52-67)

27. The method of claim 24, wherein acquiring data from at least one sensor comprises acquiring data from a plurality of sensors, the plurality of sensors configured to acquire data relating to a plurality of physiologic variables. (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6)

28. The method of claim 72, further comprising generating a certainty score for each of the diagnostic interpretations. (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6. Probability of diagnosis.)



Art Unit: 3736

60. The method of claim 74gli, further comprising:

displaying the plurality of diagnostic interpretations to a clinician; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

prompting the clinician for a selection of one of the plurality of diagnostic interpretations; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6) and

receiving a selection from the clinician of one of the plurality of diagnostic interpretations. (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6)

61. The method of claim 60, further comprising providing a certainty score for each of the plurality of displayed diagnostic interpretations. (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6. Probablility of diagnosis.)

66. A method of monitoring a patient, comprising:

acquiring data from a plurality of sensors that are coupled to a patient; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6)

selecting a first rule set comprising a first plurality of rule-based algorithms based on the acquired data; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6)

applying the first rule set to the acquired data to produce an at least one diagnostic interpretations; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6)

Art Unit: 3736

displaying the at least one diagnostic interpretations; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6)

receiving a selection first based on a selected diagnostic interpretation of a second rule set comprising a second plurality of rule-based algorithms; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6)

applying the second rule set to the acquired data to produce at least one second plurality of diagnostic interpretations; and (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6)

displaying the at least one second plurality of diagnostic interpretations. (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6)

67. The method of claim 66, wherein displaying at least one first or second diagnostic interpretations comprises displaying a certainty score for each diagnostic interpretation of the at least one diagnostic interpretations. (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6. Probability of diagnosis.)

68. A patient physiologic monitoring assembly as described in claim 2, wherein said logic is further adapted to receive a selection of the first diagnostic interpretation or the second diagnostic interpretation from a clinician. (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6)

69. The method of claim 11 wherein the plurality of rules of the first rule set are directed

Art Unit: 3736

towards a first type of diagnostic interpretation and the plurality of rules of the second rule set are directed towards a second type of diagnostic interpretation. (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

70. The method of claim 69 wherein the first type of diagnostic interpretation is a general case diagnostic interpretation is a specific case diagnostic interpretation. (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6)

71. The method of claim 70 wherein the second type of diagnostic interpretation is a cardiological diagnostic interpretation. (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6)

72. A method for diagnosing the medical condition of a patient, the method comprising:  
acquiring patient data; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

applying a first rule set comprising a plurality of rule-based algorithms to the acquired patient data, the first rule set comprising rule-based algorithms directed to producing at least one general diagnostic interpretation of the patient data based on the application of the first rule set; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

evaluating the at least one general diagnostic interpretation to select a second rule set comprising a plurality of rule-based algorithms directed to producing at least

Art Unit: 3736

one specific diagnostic interpretation; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

applying the selected second rule set to the acquired patient data; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

generating at least one specific diagnostic interpretation of the patient data based on the application of the second rule set; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

displaying at least one specific diagnostic interpretation of the patient data based on the application of the second rule set. (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

73. The method of claim 72 wherein the specific diagnostic interpretation is cardiological diagnostic interpretation. (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

74. A method of monitoring the medical condition of a patient, comprising:

storing a plurality of rule sets configured to produce an independent diagnostic interpretation when applied to physiological data; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

acquiring physiological data from a plurality of sensors coupled to the patient, the plurality of sensors acquiring physiological data relating to more than one patient characteristic; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

Art Unit: 3736

selecting a first rule set from the plurality of rules sets based on the acquired physiological data; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

applying the first rule set to the acquired physiological data; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

generating a first diagnostic interpretation based on the application of the first rule set to the physiological data; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

applying the second rule set to the acquired physiological data; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

generating a second diagnostic interpretation based on the application of the second rule set to the physiological data. (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

75. The method of monitoring the medical condition of a patient of claim 74 wherein the second rule set is selected based on the first diagnostic interpretation. (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

76. A system for using rule based algorithms, comprising:

a data storage device configured to store a plurality of rule sets comprising a plurality of rule-based algorithms; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

a data acquisition device configured to acquire data from a patient; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

a controller that receives and processes the acquired data; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

a first logic configured to select a first rule set from the data storage device to be applied to the acquired data, the rule set being selected based on the acquired data; and (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

a second logic configured to select a second rule set from the data storage device to be applied to the acquired data, the second rule set being selected based on the acquired data; (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

wherein the controller receives the selected first rule set and second rule set, applies the first rule set to the acquired data to produce a first diagnostic interpretation of the acquired data, and applies the second rule set to the acquired data to produce a second diagnostic interpretation of the acquired data. (column 1, lines 45-65, column 4, lines 9-60, columns 5 and 6.)

**Claims 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 13, 14, 16, 17, 20, 22, 24, 25, 27, 28, 61, 66, 67, 69, 70, 71, 72, 73, 74, 75 and 76 are rejected under 35 U.S.C. 102(e) as being anticipated by Iliff US Patent Publication Number 2005/0010088.**

1. A patient physiologic monitoring assembly comprising:

a plurality of sensors generating a real-time physiologic data stream, said real-time physiologic data stream including a plurality of physiologic variables; ([0072-0075] also incorporated by reference USPN 6,022,315 columns 49-53 and 64)

a first logic rule set including a plurality of logic rules for interpreting the physiologic variables; ([0073-0087] Main automated diagnostic system with initial diagnosis)

a second logic rule set including a plurality of logic rules for interpreting the physiologic variables; ([0073-0087] Panel module with strategies, passively listening) and

a controller receiving said real-time physiologic data stream, said controller including a logic adapted to [0005-0006];

cross reference said plurality of physiologic variables with the first logic rule set and second logic rule set; ([0073-0087] diagnostic and panel modules produce separate results) and

generate at least a first diagnostic interpretations of said plurality of physiologic variables utilizing said first logic rule set and a second diagnostic interpretation of said plurality of physiologic variable utilizing the said second logic rule set. ([0073-0087] diagnostic and panel modules produce separate results from same data)

2. A patient physiologic monitoring assembly as described in claim 1, wherein said logic is further adapted to display said first and second diagnostic interpretations on a display element. [0076-0087]

3. A patient physiologic monitoring assembly as described in claim 1, wherein said logic is further adapted to select said first logic rule set and said second logic rule set from a rules database, said rules database including a plurality of logic rule sets. [0076-0087]

5. A patient physiologic monitoring assembly as described in claim 3, wherein said logic is further adapted to modify one of said plurality of logic rules within said first logic rule set. ([0005-0006, 0072] patents incorporated by reference USPN 5, 660,176 columns 59-63)

6. A patient physiologic monitoring assembly as described in claim 5, wherein said modification comprises editing one of said plurality of logic rules. ([0005-0006, 0072] patents incorporated by reference USPN 5, 660,176 columns 59-63)

7. A patient physiologic monitoring assembly as described in claim 5, wherein said modification comprises deleting one of said plurality of logic rules. ([0005-0006, 0072] patents incorporated by reference USPN 5, 660,176 columns 59-63)

8. A patient physiologic monitoring assembly as described in claim 5, wherein said modification comprises adding a new logic rule to said first logic rule set. ([0005-0006, 0072] patents incorporated by reference USPN 5, 660,176 columns 59-63)



Art Unit: 3736

9. A patient physiologic monitoring assembly as described in claim 3, wherein said logic is further adapted to add a new logic rule set to said rules database. ([0005-0006, 0072] patents incorporated by reference USPN 5, 660,176 columns 59-63)

10. A patient physiologic monitoring assembly as described in claim 1, further comprising a plurality of networked medical facilities in communication with said controller such that said first logic rule set may be received from any of said plurality of networked medical facilities. ([0005-0006, 0072] patents incorporated by reference MDATA system)

11. (Currently Amended) A method for providing diagnostic aid to a clinician monitoring the medical condition of a patient, the method comprising:

storing a plurality of sets of rule-based algorithms capable of generating different diagnostic interpretations of the same physiological data; ([0073-0087] diagnostic and panel modules produce separate results from same data)

acquiring physiological data relating to the patient from at least one sensor;  
applying at least one rule-based algorithm from a first set of the of the rule-based algorithms to the acquired data; ([0072-0075] also incorporated by reference USPN 6,022,315 columns 49-53 and 64)

generating a first diagnostic interpretation based on the application of the at least one rule-based algorithms from the first set to the acquired data; ([0073-0087]

diagnostic and panel modules produce separate results from same data)

displaying the first diagnostic interpretation to the clinician; ([0073-0089]

diagnostic and panel modules produce separate results from same data. Final results displayed to physician)

applying at least one rule-based algorithm from a second set of the rule-based algorithms to the acquired data: ([0073-0089] diagnostic and panel modules produce separate results from same data)

generating a second diagnostic interpretation based on the application of the at least one rule-based algorithm from the second set to the acquired data: ([0073-0089] diagnostic and panel modules produce separate results from same data) and

displaying the second diagnostic interpretation to the clinician. ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician)

13. The method of claim 11, wherein determining which rule-based algorithm to apply comprises receiving data relating to a characteristic of the patient, and selecting a rule-based algorithm to apply based on the electronic logical analysis of the received data relating to the characteristic of the patient. . [0073-0089]

14. The method of claim 13, wherein acquiring data relating to the patient comprises

acquiring vital signs data. [0073-0089]

16. The method of claim 11, further comprising:

storing the plurality of rule based algorithms at a remote location; ([0005-0006, 0072] patents incorporated by reference describe MDATA system based in servers) and transferring the rule-based algorithm that is to be applied from the remote location. ([0005-0006, 0072] patents incorporated by reference describe MDATA system based in servers)

17. The method of claim 11, wherein generating a response based on the application of at least one of the plurality of rule-based algorithms comprises generating an alarm. ([0005-0006, 0072] patents incorporated by reference USPN 5,660,176 column 25-26)

20. The method of claim 11, wherein generating a response is based on applying a plurality of rule-based algorithms from a set of rule-based algorithms. ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician)

22. The method of claim 72, further comprising generating an alarm based on the application of the plurality of algorithms. ([0005-0006, 0072] patents incorporated by reference USPN 5,660,176 column 25-26)

24. The method of claim 72, wherein acquiring patient data relating to the subject comprises acquiring physiological data relating to the patient from at least one sensor coupled to the subject. ([0072-0075] also incorporated by reference USPN 6,022,315 columns 49-53 and 64)

25. The method of claim 21, wherein acquiring patient data comprises acquiring data from a database record relating to the subject. [0073-0075]

27. The method of claim 24, wherein acquiring data from at least one sensor comprises acquiring data from a plurality of sensors, the plurality of sensors configured to acquire data relating to a plurality of physiologic variables. ([0072-0075] also incorporated by reference USPN 6,022,315 columns 49-53 and 64)

28. The method of claim 72, further comprising generating a certainty score for each of the diagnostic interpretations. ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

61. The method of claim 60, further comprising providing a certainty score for each of the plurality of displayed diagnostic interpretations. ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

66. A method of monitoring a patient, comprising:

acquiring data from a plurality of sensors that are coupled to a patient; ([0072-0075] also incorporated by reference USPN 6,022,315 columns 49-53 and 64)

selecting a first rule set comprising a first plurality of rule-based algorithms based on the acquired data; ([0073-0087] Main automated diagnostic system with initial diagnosis)

applying the first rule set to the acquired data to produce at least one diagnostic interpretation; ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

displaying the at least one diagnostic interpretation; ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

receiving a selection first based on a selected diagnostic interpretation of a second rule set comprising a second plurality of rule-based algorithms; ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

applying the second rule set to the acquired data to produce at least one second plurality of diagnostic interpretations; ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.) and

displaying the at least one second plurality of diagnostic interpretations. ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

67. The method of claim 66, wherein displaying at least one first or second diagnostic interpretations comprises displaying a certainty score for each diagnostic interpretation of the at least one diagnostic interpretations. ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

69. The method of claim 11 wherein the plurality of rules of the first rule set are directed towards a first type of diagnostic interpretation and the plurality of rules of the second rule set are directed towards a second type of diagnostic interpretation. ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

70. The method of claim 69 wherein the first type of diagnostic interpretation is a general case diagnostic interpretation is a specific case diagnostic interpretation. ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

71. The method of claim 70 wherein the second type of diagnostic interpretation is a cardiological diagnostic interpretation. ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

72. A method for diagnosing the medical condition of a patient, the method comprising:  
acquiring patient data; ([0072-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

applying a first rule set comprising a plurality of rule-based algorithms to the acquired patient data, the first rule set comprising rule-based algorithms directed to producing at least one general diagnostic interpretation of the patient data based on the application of the first rule set; ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

evaluating the at least one general diagnostic interpretation to select a second rule set comprising a plurality of rule-based algorithms directed to producing at least one specific diagnostic interpretation; ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

applying the selected second rule set to the acquired patient data; ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

generating at least one specific diagnostic interpretation of the patient data based on the application of the second rule set; ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

displaying at least one specific diagnostic interpretation of the patient data based on the application of the second rule set. ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

73. The method of claim 72 wherein the specific diagnostic interpretation is cardiological diagnostic interpretation. ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

74. A method of monitoring the medical condition of a patient, comprising:

storing a plurality of rule sets configured to produce an independent diagnostic interpretation when applied to physiological data; ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)



acquiring physiological data from a plurality of sensors coupled to the patient, the plurality of sensors acquiring physiological data relating to more than one patient characteristic; ([0072-0075] also incorporated by reference USPN 6,022,315 columns 49-53 and 64)

selecting a first rule set from the plurality of rules sets based on the acquired physiological data; ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

applying the first rule set to the acquired physiological data; ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

generating a first diagnostic interpretation based on the application of the first rule set to the physiological data; ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

applying the second rule set to the acquired physiological data; ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

generating a second diagnostic interpretation based on the application of the second rule set to the physiological data. ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight.)

75. The method of monitoring the medical condition of a patient of claim 74 wherein the second rule set is selected based on the first diagnostic interpretation. ([0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician with ranking, score and weight. Panel strategies passively listen as diagnostic module goes through process.)

76. A system for using rule based algorithms, comprising:

- a data storage device configured to store a plurality of rule sets comprising a plurality of rule-based algorithms; ([0005-0006, 0072-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician)

- a data acquisition device configured to acquire data from a patient; ([0072-0075] also incorporated by reference USPN 6,022,315 columns 49-53 and 64)

- a controller that receives and processes the acquired data; ([ 0005-0006, 0072-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician)

- a first logic configured to select a first rule set from the data storage device to be applied to the acquired data, the rule set being selected based on the acquired data; ([ 0005-0006, 0072-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician) and

- a second logic configured to select a second rule set from the data storage device to be applied to the acquired data, the second rule set being selected based on

Art Unit: 3736

the acquired data; ([0005-0006, 0072-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician)

wherein the controller receives the selected first rule set and second rule set, applies the first rule set to the acquired data to produce a first diagnostic interpretation of the acquired data, and applies the second rule set to the acquired data to produce a second diagnostic interpretation of the acquired data. ([0005-0006, 0073-0089] diagnostic and panel modules produce separate results from same data. Final results displayed to physician)

### ***Response to Arguments***

Applicant's arguments with respect to all the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharick Naqi whose telephone number is 571-272-3041. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on 571-272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SN  
December 18, 2007



Michael Astorino